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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,393	05/11/2001	Horst Rumpf	DE000076	8218

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EXAMINER

ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/854,393

Applicant(s)

RUMPF ET AL.

Examiner

Jorge L Ortiz-Criado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 06
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. The drawings are objected to because the node wherein the signals "r" and "c" enters and output "e", and the node wherein the signal "u" and signal "f" enters, descriptive labels should be provided, such as(+/-) symbols, labels describing functions of the nodes). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. As provided in 37 CFR 1.77(c), Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

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REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 4 and 5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 4 states "applying the disturbance variable to a controller, this limitation is not described. In page 3 lines 6-7, the disturbance variable is transferred to the disk drive 5. In the same page lines 10-15 the controller 3 is described as to control the system of the disk drive 5 by minimizing the control signal e and adaptation of the controller parameter. The disturbance

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variable is further added to the output control signal u (See page 3, line 15; Fig. 1, output of controller 3).

Therefore, the disturbance-variable from the feed-forward filter is not being applied to the controller 3, as applicant claimed in claim 4.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsin et al. U.S. Patent No. 6,580,579.

Regarding claim 1, Hsin et al. discloses an apparatus having a control circuit, which comprises a feed-forward filter arrangement (See col. 2, lines 28-40; col. 3, lines 54-63; col. 4, lines 4-7; Fig. 2, ref. #, 230,232)

and a controller (See col. 2, lines 41-67; col. 4, lines 12-15; Fig. 2, ref. #214),

characterized in that an adaptation of the parameters of the feed-forward filter arrangement and the parameters of the controller is effected during operation of the apparatus (See Abstract ;col. 2, lines 28-40; col. 4, lines 10-15; col. 4, lines 41-48; Fig. 2,5)

Regarding claim 3, Hsin et al. discloses said apparatus includes a disk drive for storage disk media (See Abstract; Fig. 1,2),

in which vibrations and internal disturbances, which occur during operation of the apparatus, are compensated by an adaptation of the parameters of the feed-forward filter arrangement and the parameters of the controller (See Abstract ; col. 2, lines 28-40; col. 4, lines 10-15; col. 4, lines 41-53; Fig. 2,5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsin et al. U.S. Patent No. 6,580,579 in view of Ferguson et al. U.S. Patent No. 5,619,581.

Hsin et al. discloses all the limitations based on claim 1 as outlined above. Hsin et al. further discloses characterized in that for the adaptation an adaptation algorithm (See col. 4, lines 46-49; Fig. 2, ref. # 232), but Hsin et al. fails to disclose wherein the adaptation algorithm is executed on a microprocessor, particularly a digital signal processor.

However this feature is well known in the art as evidenced by Ferguson et al., which discloses a control system for cancellation vibration whereby the system includes an adaptation algorithm executed by a microprocessor, particularly a digital signal processor (See col. 3, lines 35-66; Fig. 2)

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to wherein the adaptation algorithm is executed on a microprocessor, particularly a digital signal processor to adjust the parameters of the feed-forward filter and controller in order to optimize faster adaptation calculations as suggested by Ferguson et al.

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsin et al. U.S. Patent No. 6,580,579 in view of Ferguson et al. U.S. Patent No. 5,619,581, and further in view of Carlson et al.

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Regarding claim 4, Hsin et al. discloses a method for responding to effects on precision of positioning of a scanning element in a disk drive (See Abstract; col. 2, lines 28-40; col. 3, lines 54-63; col. 4, lines 4-7; Fig. 2, ref. #, 230,232), the method comprising:

sensing forces acting the disk drive (See Abstract ; col. 2, lines 28-40; col. 4, lines 10-15; col. 4, lines 41-53; Fig. 2,5).

converting detected forces into disturbances signals (See Abstract ; col. 2, lines 28-40; col. 4, lines 10-15; col. 4, lines 41-53; Fig. 2,5)

applying the disturbances signals to a feed-forward filter to obtain a disturbance variable (See Abstract ; col. 2, lines 28-40; col. 4, lines 10-15; col. 4, lines 41-53; Fig. 2,5);

applying the disturbance variable to a controller (See col. 2, lines 41-67; col. 4, lines 12-15; Fig. 2, ref. #214)

adjusting the disk drive for errors using the controller (See col. 2, lines 41-67; col. 4, lines 12-15; Fig. 2, ref. #214);

receiving references variables, error signals , and control variables (See Abstract ; col. 2, lines 28-40; col. 4, lines 10-15; col. 4, lines 41-53; Fig. 2,5)

Hsin et al. further discloses alter by adapting the parameters of the feed forward filter and the controller (See Abstract ; col. 2, lines 28-40; col. 4, lines 10-15; col. 4, lines 41-53; Fig. 2,5), but Hsin et al. fails to disclose a processor and providing outputs from a processor to alter parameters of the feed forward filter and the controller.

However this feature is well known in the art as evidenced by Ferguson et al., which discloses a control system for cancellation vibration whereby the system includes an adaptation

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algorithm executed by a processor (See Abstract; col. 3, line 35 to col. 4, lines 11; col. 5, line 61 to col. 6, line 33; Fig. 2)

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to wherein the adaptation algorithm is executed on a processor to adjust the parameters of the feed-forward filter and controller, in order to optimize faster adaptation calculations as suggested by Ferguson et al.

Regarding claim 5, the combination of Hsin et al with Ferguson et al. would show wherein the controller comprises

Hsin et al. teaches an error signal input, for receiving error signals responsive to operation of controlled device and

an input for receiving adapted control parameters, relative to variations in type of external disturbances of controlled device (See Hsin et al col. 2, lines 41-67; col. 4, lines 12-15; Fig. 2, ref. #214) and

a control variable output for supplying signals for controlling the controlled device responsive to both the error signal and the adapted control parameters (See Hsin et al col. 2, lines 41-67; col. 4, lines 12-15; Fig. 2, ref. #214, 216, 234)

It would have been obvious to one with ordinary skill in the art at the time of the invention to provide adapted control parameter from the processor in order to obtain faster calculations inputted to the controller as teaches by Ferguson et al. (See Abstract; col. 3, line 35 to col. 4, lines 11; col. 5, line 61 to col. 6, line 33; Fig. 2);

Response to Arguments

7. Applicant's arguments filed 10/20/2003 have been fully considered but they are not persuasive.

Applicant's response to the objection of the specification:

Applicants argued that headings in the specification are optional traditional section.

The examiner cannot concur because, the specification is not in compliance with the 37 CFR 1.77(b)(c). Therefore changes to the specifications are not optional, but rather non-optional.

Applicant's response to Applicant's response to the rejection of claim 1 as unpatentable over Hsin et al:

Applicants argued that Hsin et al does not disclose, "the parameters of the controller are affected". The examiner cannot concur, because claim 1 does not show when, where, how, etc is "affected". Therefore any calculation, process or function in the controller is interpreted as "effected during process".

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "affected") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicants also argued, "there is no motivation for the additional flexibility provided..."

Accordingly no motivation is needed under 35 U.S.C. (102) rejection.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "additional flexibility provided by allowing the controller to receive additional control parameters") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

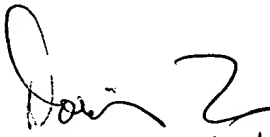
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm), Alternate Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6743.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

joc


DORIS H. TO 11/17/03
SUPERVISORY PATENT EXAMINER
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